

What is claimed:

1. A method for removing hair from a bovine animal, wherein said animal is immobilized, dispatched, and fabricated, said method comprising:

(a) contacting a depilatory substance comprising sodium hydroxide to said animal's hair;

5 (b) removing said hair contacted by said means for chemical depilation;

(c) collecting first and second waste streams from said step (a) of contacting and from said step (b) of removing, wherein said waste streams are collected separately and wherein said first waste stream contains a greater content of animal hair components than said second waste stream;

10 (d) separately processing said first waste stream by separating animal hair components from said first waste stream;

(e) recycling at least one of said first and second waste streams to reuse components thereof in said dehairing operation.

2. The method of Claim 1 wherein at least one of said first or second waste streams contain substantially no water.

3. The method of Claim 1 further comprising the directing one or more of said waste streams through means for separation selected from the group consisting of a centrifuge, a vibrating screen and a screen having hydrophobic material associated therewith.

4. A system for removing hair from a bovine animal, wherein said animal is immobilized, dispatched, and fabricated, said system comprising:

(a) a spray apparatus that sprays a depilatory substance onto said animal's hair, said depilatory substance selected from the group consisting of calcium oxides, thioglycolic acids, sodium hydroxides, hydrogen peroxides, potassium hydroxide, sodium sulfides, potassium sodium sulfides, potassium sulfides, and combinations thereof to said animal's hair;

(b) at least one pressurized water jet that when directed to said animal's hair after being contacted with said depilatory substance is sufficient to remove said animal's hair;

(c) means for collecting waste streams from said means for contacting and from said means of removing, wherein said waste streams are collected separately or together; and,

(d) means for processing said waste streams by separating solid waste from liquid waste and treating at least one of said waste streams to allow at least one of said waste streams to be recycled.

5. The system of Claim 4 wherein said waste streams contain substantially no water.

6. The system of Claim 4 further comprising the directing one or more of said waste streams through a means for separation.

7. The system of Claim 6 wherein the means for separation is selected from the group consisting of a centrifuge, a vibrating screen, and a screen having hydrophobic material associated therewith.

8. A system for removing hair from a bovine animal, wherein said animal is immobilized, dispatched and fabricated, comprising:

(a) a first spraying device that sprays a prewetting substance onto said animal's hair;

5 (b) a second spraying device that sprays a depilatory substance onto said animal's hair;

(c) a water jet device wherein jets of water are directed to said hair contacted by said depilatory substance in order to cause the removal of the same;

10 (d) an apparatus for collecting a waste stream from said prewetting contacting apparatus, from said depilatory contacting apparatus, and from said removal apparatus, wherein said waste streams are collected separately or together; and

(e) an apparatus for processing said waste streams by separating solid waste from liquid waste and treating said waste streams, the processing apparatus also including an apparatus that removes fine solid waste from said liquid waste; and

15 (f) an apparatus that recovers and recycles water from said liquid waste after removal of said fine solid waste and removal of residual sulfides in said liquid waste.

9. The system of Claim 8 wherein said depilatory substance is a mixture of potassium hydroxide and sodium hydroxide.